

AMENDMENTS TO THE SPECIFICATION

[0001] This application is a Continuation-In-Part of application serial No. 09/687,687, filed October 13, 2000 now U.S. Patent No. 6,742,308.

[0036] The fixed inner spool 56 is illustrated in detail in Figures 4 to 8 and has a central through bore 63 and a plurality of outwardly facing, annular chambers 64,65,66, and 67 separated by annular rings flanges 68,69,70,71 and 72 at the top and bottom of the spool and between each adjacent pair of chambers. The chambers 64, 65, 66, and 67 are open at their outer ends to define outwardly facing annular openings, as illustrated in Figure 4. The swivel casing is a cylindrical member which rotates around the inner spool and has a diameter slightly greater than the diameter of the outer rings 68 to 72, so that it forms an outer wall for each of the annular chambers, as best illustrated for chamber 65 in Figure 6 and chamber 64 in Figure 7. Ring seals 76 are mounted on each annular ring to project outwardly into rotatable sealing engagement with the inner surface of casing, 60, sealing each of the chambers from the adjacent chambers and the exterior of the swivel joint assembly. One ring seal 76 is mounted on each of the upper and lower rings 68 and 72, while two spaced ring seals 76 are provided on each of the rings 69, 70 and 71 which separate adjacent chambers, for additional security. The seals are of any suitable resilient seal material of sufficient durability and reliability. Suitable seals for use as the ring seals [[786]] 76 are Z-seals with a nitride or poly-vi lip and a fluorotrel base, as manufactured by Northern American Seals of Fresno, California.